

METHODS, SYSTEMS, AND USES FOR CALIXARENES

ABSTRACT

A method of identifying, detecting and/or chemically using NO_x compounds is provided, wherein calixarene complexes are exposed to a nitrogen-oxide gas containing samples and form calixarene-nitrosonium complexes that are readily identified and detectable. Importantly, the process of forming one or more calixarene-nitrosonium (NO⁺)
5 complexes is reversible. The calixarene-nitrosonium complexes dissociate upon decoloration enabling the parent calixarenes to be recovered.